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RETURNS TO COTTON MERCHANTS* —CONCURRENT *Vs.* LAGGED MARGINS

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Introduction

A recent study¹ analysing marketing margins in cotton disclosed that in marketing of raw cotton, the farmer's share in the eventual realisation from the sales of both cotton lint and cottonseed was as high as 90 per cent. The study also revealed that the gross returns to cotton merchants averaged just three to four per cent of the value of such sales. Both the 'farm' and 'trade' shares were derived mainly on the basis of the prices of *kapas*, cotton lint and cottonseed prevailing concurrently in the assembling and terminal markets. Since then, doubts have been expressed in some quarters about the validity of the concurrent marketing margin method in assessing the true shares of cotton growers and merchants in the consumer's rupee. The present paper attempts to examine this criticism with the help of the available empirical data which shed some light on trading and stock-holding practices of cotton merchants.

The main burden of the attack on the concurrent margin method as used in the marketing efficiency analysis, is that it ignores the wide seasonal price fluctuations in an agricultural commodity like cotton which is sold by the farmers during a short span of only 4 to 6 months but consumed by the mills almost evenly round the year. Since it is believed that the cotton trade holds large pipe-line stocks before the mills eventually consume them, it follows that the seasonal price variations which are reflected through a sharp rise in price during the off-season, necessarily fetch considerable windfall to cotton merchants. Attempts have not been lacking to estimate such windfall by ascribing the entire difference between the post-harvest low price and the end-of season peak price of a selected year, after adjusting such difference for approximate storage costs for the intervening period, as a profit of the cotton trader. Since the concurrent marketing margin method does not yield estimates of such windfall, it is alleged that the method under-estimates the merchant's share and over-estimates the farmer's share in the consumer's rupee.

The validity of this criticism essentially rests on the validity of the underlying assumptions involved in the estimates of windfall from seasonal price variations. It is tacitly assumed in all such estimates that (i) the seasonal price variations are a regular feature of the market; (ii) that the price rise from the post-harvest heavy-arrival months to the subsequent months of lean arrivals invariably exceeds

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1. M. G. Pavaskar and V. Radhakrishnan: Cost of Marketing Cotton, Department of Economics, University of Bombay, Bombay. A summary of this study had earlier appeared in *Economic and Political Weekly*, Review of Agriculture, Vol. V, No. 13, March 1970, under the caption "Marketing Margins in Cotton."

the normal cost of storage. In other words, if stocks are carried in storage, the returns from storage are necessarily positive; and (iii) throughout the intervening period, the merchants carry in the form of unsold stocks most or considerable part of their purchases. How far are these assumptions really valid in the business world?

Seasonality in Cotton Prices

In cotton, the first assumption is rather difficult to test for the recent decades. The difficulty arises because cotton prices were subject to statutory price controls since World War II through all years till August 30, 1967. Hence, quite often over long periods, cotton prices ruled unchanged at the statutory price ceiling in official records, though the actual unofficial market prices fluctuated both ways over the statutory ceilings. But no record exists of such unofficial prices. Cotton prices and distribution controls were finally removed from September 1, 1967. Table I therefore shows the prices of cotton at Bombay (which is the premier terminal market for cotton in the country) for two important varieties grown in Maharashtra during the last three cotton years. Three years is too short a period to test the assumption regarding the seasonality in cotton prices. Nevertheless, we have restricted to these three years because similar data are not available for earlier years. The fact that these three years are most recent is also a point in their favour.

TABLE I.—AVERAGE PRICES OF COTTON AT BOMBAY, 1967-68 TO 1969-70 *
(Rs. per 300 kg.)

Month	1967-68		1968-69		1969-70	
	Khandesh Virnar	L. 147 30/32"	Khandesh Virnar	L. 147 30/32"	Khandesh Virnar	L. 147 30/32"
September	N.Q.	N.Q.	1,333	N.Q.	1,421	1,536
October	1,382	N.Q.	1,250	N.Q.	1,374	N.Q.
November	1,308	1,475	1,209	1,401	1,327	1,433
December	1,276	1,470	1,151	1,374	1,288	1,415
January	1,244	1,424	1,167	1,379	1,388	1,498
February	1,170	1,302	1,187	1,387	1,466	1,588
March	1,131	1,251	1,238	1,415	1,506	1,609
April	1,130	1,251	1,313	1,461	1,532	1,639
May	1,191	1,307	1,329	1,517	1,557	1,679
June	1,200	1,368	1,330	1,521	1,583	1,705
July	1,203	1,371	1,338	1,506	1,623	1,755
August	1,205	1,370	1,378	1,531	N.Q.	1,712

N.Q. = No Quotation.

Khandesh Virnar cotton is grown mostly in Khandesh region of Maharashtra State, while L. 147 variety is largely grown in Vidarbha. The arrivals of Khandesh Virnar usually begin in October of each year and extend upto April of the next year. The bulk of the crop, however, is received in the markets during the months

of November, December and January. Thus, during 1968-69, of the total arrivals of *kapas* of 24,000 tonnes in the two markets of Khandesh, *viz.*, Dhulia and Jalgaon, nearly 18,000 tonnes or three-fourths were received during these three months. The arrivals of L. 147 *kapas* normally begin little later than those of Khandesh Virnar. Commencing from November, the L. 147 market receipts end mostly in May of the following year. The bulk of this crop is marketed between December and February. Thus, Amraoti and Khamgaon, the two important markets in Vidarbha, together received over 105,000 tonnes of *kapas* during 1968-69; of this, over 70,000 tonnes (or 67 per cent) were received in the three months of December, January and February.

Keeping this pattern of market arrivals in the backdrop, one may view the price trend of the two varieties during the last three years. It will be at once clear from Table I that though the two years of 1968-69 and 1969-70 showed a distinct rise in price from the peak marketing months to the season-end, no such seasonal rise was discernible during 1967-68. In fact, prices declined substantially during that year after the rush of arrivals was over. Evidently, a seasonal upward movement in cotton prices after the sale of the crop in the assembling markets, cannot be regarded as an unexceptional regular phenomenon of the cotton market. The risk of subsequent fall in prices cannot be dismissed lightly. It is often real. Nevertheless, it may be conceded that the cotton prices of the past three years seem to have favoured, *prima facie*, the cotton merchants.

Storage Costs

A seasonal rise in price, however, is not the complete evidence of windfall from storage. The returns from storage for any commodity depend upon the prices of that commodity rising during the storage interval by an amount more than the actual storage cost. When a seasonal rise in price falls short of such storage costs, the returns from storage would, in fact, be negative, *albeit* smaller than when prices decline through the season. In the latter case, the storage costs actually increase the losses from price fall.

Storage or carrying charges are expenses incurred for the sake of storage, interest and insurance on account of a commodity physically held in store for sale in the future. What constitutes storage cost, however, is not a hard and fast matter. The constituents of storage costs differ from commodity to commodity, though godown rent, interest and insurance are undoubtedly the major elements in them. Storage costs for any commodity are also not constant from year to year, or even within a year. Nor can all the periodical variations in storage costs be precisely determined. Nevertheless, a fairly representative estimate of storage costs for any commodity can be computed within reasonable degree of certainty for each year.

An important element of storage costs for any commodity is interest on owned and borrowed capital invested in stocks. Interest rates vary according to the sources of finance, and character and credit-worthiness of borrowers. The bank interest during 1967-68 and 1968-69 for advances against stocks of cotton was around 10 per cent per annum. In April, 1970, under a Reserve Bank of India directive, the rate of interest on bank loans was raised from 10 per cent to 12 per cent. In addition, the banks also began to levy commitment charges for the under-utilization of the sanctioned credit limits.

Bank interest rates by themselves, however, do not show the actual magnitude of interest costs on storage. As it is, under the selective credit control scheme, the Reserve Bank of India fixes from time to time the minimum margins for loans to traders against cotton. On November 1, 1967, the minimum margin was fixed at 35 per cent of the value of cotton. The margin was raised to 60 per cent on January 21, 1970 and to 75 per cent on April 28, 1970. Further in 1967-68 and also again in 1969-70, a ceiling on aggregate advances against cotton in each month by a bank was fixed by the Reserve Bank at 85 per cent of the actual credit granted in the corresponding month of the previous year. As a result of these different restrictions, the trade invariably supplements its borrowings from commercial banks by finance drawn from other sources. Interest rates on such non-bank advances to the trade varied between 12 and 18 per cent, or even more depending upon the source of finance. Having regard to these facts, it seems reasonable to estimate the incidence of interest cost on cotton storage at 12 per cent per annum (or one per cent per month) for 1967-68 and 1968-69, and at 15 per cent per annum (or one and one-fourth of one per cent per month) for 1969-70 of the value of cotton.

No reliable data are available on the storage cost of cotton on account of godown rent and insurance. Moreover, in the storage of cotton, deterioration in quality during storage and loss in weight during transit also constitute major cost elements. It is difficult to estimate these quantitative and qualitative losses in value terms as such losses vary from time to time, and also according to the nature of cotton, its origin, its picking, etc. In the absence of any precise information on these diverse details, we have preferred to assess all storage costs of cotton other than interest costs, at just one-half of one per cent per month of the value of cotton. Therefore, the aggregate storage costs of cotton inclusive of interest costs have been assumed at one and one-half of one per cent per month for 1967-68 and 1968-69 and one and three-fourths of one per cent per month for 1969-70 of the value of cotton held in storage.

Returns from Storage

The returns from storage for any commodity depend upon the change in the price of that commodity during the period of storage relative to its storage cost. It should be recognized that the returns from storage are in addition to the normal marketing returns, and, therefore, do not include the latter. It follows that the returns from storage solely depend upon the prices prevailing in the same terminal market between different storage intervals, and have no connection whatsoever with the prices ruling in the assembling market at the time of the flow of the commodity into storage.

Let P_t be the price at time 't', P_i the price at any subsequent time 'i', $i-t$ being the storage interval and c the storage cost for the period $i-t$, then the returns from storage during the interval $i-t$ would be

$$P_i - (P_t + c).$$

The returns from storage are positive if $P_i > P_t + c$ and negative if $P_i < P_t + c$.

Table II shows the estimated returns from storage of cotton of Khandesh Virnar and L. 147 varieties for each of the months during 1967-68, 1968-69 and

TABLE II—ESTIMATED AVERAGE RETURNS FROM STORAGE OF COTTON FOR DIFFERENT MONTHS, 1967-68 to 1969-70

(Rs. per 300 kg.)

	Khandesh Virnar (28/32")			L. 147 (30/32")		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
	Base price	1,276	1,176	1,334	1,399	1,380
Storage costs (per month) ..	19.00	17.50	23.00	21.00	20.50	26.00
Month	Estimated Average Returns					
February	-144 (11.3)	-24 (2.0)	+86 (6.2)			
March	-202 (15.8)	+9.50 (0.8)	+103 (7.7)	-190 (13.6)	-6.00 (0.4)	+57 (3.8)
April	-222 (17.4)	+67 (5.7)	+106 (8.0)	-211 (15.1)	+19.50 (1.4)	+61 (4.1)
May	-180 (14.1)	+65.50 (5.6)	+108 (8.1)	-176 (12.6)	+55 (4.0)	+75 (5.0)
June	-190 (14.9)	+49 (4.2)	+111 (8.3)	-136 (9.7)	+38.50 (2.8)	+75 (6.0)
July	-206 (16.1)	+39.50 (3.4)	+128 (9.6)	-154 (11.0)	+3 (0.2)	+99 (6.6)
August	-223 (17.5)	+62 (5.3)	N.Q.	-176 (12.6)	+7.50 (0.5)	+30 (2.0)
September	-144 (8.9)	+87.50 (7.4)	N.Q.	N.Q.	-8.00 (0.6)	N.Q.
October				N.Q.	N.Q.	N.Q.
Average	-185 (14.5)	+44.50 (3.8)	+107 (8.0)	-173.83 (12.4)	+15.64 (1.1)	+66.17 (4.4)

N.Q. = No Quotation.

Notes : (1) Base price for Khandesh Virnar = average of Khandesh Virnar prices for three months from November to January.

(2) Base price for L. 147 = average of L. 147 prices for three months from December to February.

(3) Storage costs—estimated at 1½ per cent per month of the base price for 1967-68 and 1968-69 and at 1¾ per cent per month for 1969-70. For convenience, storage costs have been rounded to either the nearest integral or .50.

(4) Figures in parentheses represent percentages to the base price.

(5) As the new crop arrivals of Khandesh Virnar begin from October, it is unlikely that the unsold stocks of that cotton would be carried in storage through October. Hence, the returns from storage are not computed for October for Khandesh Virnar cotton.

1969-70. The price data used are for Bombay market. The returns are computed on the assumption that all cotton for storage is bought during the peak marketing months, and sold thereafter. The average price during the peak marketing period is therefore used as the base price (P_t) and is centred at the middle of the period. As stated earlier, the peak marketing period for Khandesh Virnar cotton extends from November to January and that for L. 147 cotton begins from December and ends in February. It is therefore assumed that Khandesh Virnar and L. 147 cottons are sold from storage, from February and March, respectively of each year. The average price of each of these subsequent months is regarded as the sale price (P_i) and is centred at the middle of that month. The storage costs for each storage interval ($i-t$) are assumed to be $1\frac{1}{2}$ per cent per month of the base price for 1967-68 and 1968-69, and $1\frac{3}{4}$ per cent per month of the base price for 1969-70. The monthly estimated returns from storage are further averaged for each year in Table II on the assumption that stocks are released from storage in equal quantities during all the months. The months when there were no quotations in the Bombay market, however, were excluded, for obviously there were no sales during those months.

It may be seen from Table II that the returns from storage of cotton were negative during 9 months and positive during 13 months for Khandesh Virnar cotton. For L. 147 cotton, they were negative during 8 months and positive during 11 months. The negative returns whenever they occurred were however generally higher than the positive returns. Thus, the negative returns for Khandesh Virnar cotton ranged from Rs. 24 to Rs. 223 per 300 kg. and averaged more than Rs. 125 for as many as 7 months; but the positive returns ranged much lower between Rs. 9.50 and Rs. 128 per 300 kg. and averaged more than Rs. 125 just once. Similarly, the negative returns for L. 147 cotton ranged upto Rs. 211 per 300 kg. and averaged more than Rs. 125 for 6 months; the positive returns, on the other hand, ranged upto a maximum of only Rs. 99.

Yearwise, the returns from storage of cotton were negative during 1967-68 and positive during both 1968-69 and 1969-70. But, in fact, the positive returns during 1968-69 were not excessively large, being less than 4 per cent of the base price for Khandesh Virnar cotton and just little more than 1 per cent of the base price for L. 147. The positive returns during 1969-70, however, averaged 8 per cent of the base price for Khandesh Virnar and 4.4 per cent for L. 147 cotton. But while viewing these high positive returns during 1969-70, one should not lose sight of the still higher negative returns from storage of cotton during 1967-68. The negative returns then averaged as much as 14.5 per cent for Khandesh Virnar cotton and 12.4 per cent for L. 147. In both the varieties of cotton, the losses from storage during 1967-68 were so high that even the aggregate gains during the subsequent two years were inadequate to cover these losses. This fact is vividly brought out in Table III, which shows the average expected and actual prices of the two cotton varieties, and the average returns from their storage for each of the months following the peak marketing period, for *all the three years together*.

TABLE III—AVERAGE EXPECTED AND ACTUAL PRICES OF COTTON AND AVERAGE RETURNS FROM STORAGE BY MONTHS FOR ALL YEARS COMBINED, 1967-68 to 1969-70

(Rs. per 300 kg.)

		Khandesh Virnar (28/32")			L. 147 (30/32")		
Average base price		1,262			1,426	
Average storage costs		20.00			22.50	
Month		Expected average price	Actual average price	Average estimated returns	Expected average price	Actual average price	Average estimated returns
February	1,302	1,274	—28 (2.2)			
March	1,322	1,292	—30 (2.4)	1,471	1,425	—46 (3.2)
April	1,342	1,328	—14 (1.1)	1,493.50	1,450	—43.50 (3.1)
May	1,362	1,359	—3 (0.25)	1,516	1,501	—15 (1.1)
June	1,382	1,371	—11 (0.9)	1,538.50	1,531	—7.50 (0.5)
July	1,402	1,388	—14 (1.1)	1,561	1,544	—17 (1.2)
August				1,583.50	1,538	—45.50 (3.2)
Average			—16.66 (—1.3)			—29.08 (2.0)

Notes : (1) All averages have been rounded to either the nearest integral or .50.
(2) Figures in parentheses represent percentages to the base price.

As will be evident, the net returns from storage during the three years from 1967-68 to 1969-70 were negative for all storage periods for both Khandesh Virnar and L. 147 cottons. The net losses on storage of Khandesh Virnar cotton for different storage intervals ranged from one-fourth of one per cent of the base price to as much as two and half per cent, and averaged $1\frac{1}{3}$ per cent for the entire period, assuming even flow of stocks from storage through all months. The net losses on storage of L. 147 cotton for different storage intervals were little higher, ranging from one-half of one per cent to little more than three per cent, and averaged 2 per cent for all years together on a similar assumption. In fact, the net losses on storage for all years together would have averaged still higher for both types of cotton, but for the deliberate omission of the month of August for Khandesh Virnar cotton and September for both Khandesh Virnar and L. 147 cotton, since the prices of the respective varieties were not quoted in these months for all the three years. As the returns from storage of cotton in both August and September were negative for those years when prices were quoted, their omission from Table III does not affect the basic argument of this paper which asserts that the gains from storage of cotton are not significant enough as to invalidate the use of the concurrent marketing margin method for assessing the true shares of cotton growers and merchants in the consumer's rupee.

As it is, the behaviour of cotton prices during the past three years was such that the realised seasonal prices of cotton averaged lower than the expected seasonal prices, yielding net losses rather than gain on storage. The results presented

in Table III clearly refute the commonly held belief that the returns from storage of cotton are necessarily positive. True, the returns from storage may be positive in some years. But these must be set-off against those in other years when they are negative. The net returns in the long run, it seems, do not yield any positive gains from storage. In fact, such returns would not be then significantly different from zero. It therefore appears that in the ultimate analysis, the profits of cotton merchants depend not so much on the lagged margins between the prices of cotton in the terminal markets as on the current margins between the prices in the assembling and the terminal markets.

Storage Pattern in Cotton

In fact, the belief that cotton merchants accumulate and hold large unsold stocks in storage to profit from the seasonal spurt in prices is itself not well founded. The belief, it seems, has its origin in the popular prejudice against the mercantile community, and has persisted in the absence of any time-series data on either the cotton stocks held by the merchants or their purchases and sales. The Textile Commissioner, however, receives regularly data on monthly consumption of Indian cotton by mills and their month-end stocks. The estimates of the monthly receipts of Indian cotton by mills could be derived from these statistics through the application of the following equation :

$$R_t = C_t - (S_{t-1} - S_t)$$

where R_t represents the estimated receipts of Indian cotton by mills for any month 't'; C_t represents the consumption of cotton by mills during the same month; S_t represent the stocks of cotton with the mills at the end of that month; and S_{t-1} represents similar stocks with the mills at the end of the previous month.

The estimates of such monthly receipts of Indian cotton by mills along with the data of their monthly mill consumption and month-end stocks of Indian cotton are presented in Table IV for the past three cotton seasons, 1967-68 to 1969-70. It will be evident that the mills receive on an average 5 to 6 lakh bales of Indian cotton in each month between December and May. In fact, 60 per cent of the annual receipts of indigenous cotton by the mills are concentrated in these six months which also happen to be the peak marketing months for *kapas*.² Evidently, the mills receive most of its cotton for the consumption and inventory demand as soon as the ginned cotton is pressed into bales. This fact is more clearly revealed in Table V which juxtaposes the monthly receipts of Indian cotton by the mills against the available monthwise data of Indian cotton pressed into bales for the period from December to May.

The monthly mill receipts of Indian cotton between December and May as a proportion of the bales pressed in the same months ranged between 71.5 and 106 per cent during 1967-68, and averaged 82.2 per cent for all the six months

2. According to the pressing returns received by the State Governments, 82 and 89 per cent of the cotton bales were pressed within these six months during the two cotton years, 1967-68 and 1968-69. (See Indian Cotton Annual, 1968-69, No. 50, East India Cotton Association Ltd., Bombay, p. 167.) True, the pressing returns do not cover the entire cotton crop, for quite a few mills located in the midst of the cotton growing belts directly receive unpressed cotton from the gins. Nevertheless, the pressing returns account for almost 85 per cent of the crop, and, hence, could be relied upon to disclose the pattern of cotton marketing.

TABLE IV—MONTHLY CONSUMPTION AND ESTIMATED RECEIPTS OF INDIAN COTTON BY MILLS IN INDIA AND THEIR MONTH-END STOCKS, 1967-68 to 1969-70

(in bales of 180 kg.)

Month	1967-68			1968-69			1969-70		
	Consumption	Stocks	Receipts	Consumption	Stocks	Receipts	Consumption	Stocks	Receipts
September	455,892	765,406	286,841	454,436	987,648	349,130	429,428	1,012,633	235,697
October	427,968	610,369	272,931	430,942	837,846	281,140	457,242	844,062	288,671
November	411,036	602,609	403,276	466,593	750,907	379,654	439,667	770,870	366,475
December	436,506	679,596	513,493	475,054	842,182	566,329	492,117	866,723	587,970
January	449,481	742,254	512,139	482,529	1,043,499	683,846	503,135	1,057,819	694,231
February	446,607	793,152	497,505	443,983	1,192,711	593,195	467,966	1,176,758	586,905
March	450,047	927,684	584,579	471,455	1,373,278	652,022	479,514	1,101,844	404,600
April	451,987	1,056,009	580,312	476,447	1,503,278	606,447	483,364	1,091,949	473,469
May	451,250	1,211,558	606,799	452,324	1,540,020	489,066	471,984	1,064,101	444,136
June	445,845	1,235,121	469,408	469,138	1,471,544	400,662	470,353	1,097,951	504,203
July	474,481	1,179,976	419,336	501,432	1,320,163	350,051	497,237	1,057,306	456,592
August	426,020	1,092,954	374,998	479,785	1,206,364	365,986	465,249	931,519	339,462
Total	5,363,120		5,521,617	5,604,118		5,717,528	5,657,256		5,382,411

RETURNS TO COTTON MERCHANTS

Source : Consumption and stocks—Office of the Textile Commission, Bombay.
Receipts have been estimated in the manner described in the text.

TABLE V—RECEIPTS OF INDIAN COTTON BY MILLS BETWEEN DECEMBER AND MAY AND INDIAN COTTON PRESSED IN THE CORRESPONDING MONTHS, 1967-68 to 1969-70

(in bales of 180 kg.)

	December	January	February	March	April	May	Total
1967-68							
1. Receipts	513,493	512,139	497,505	584,579	580,312	606,799	3,294,827
2. Bales pressed	620,523	577,876	658,653	817,141	759,295	572,659	4,006,147
3. Proportion of (1) to (2) (per cent)	82.8	88.6	75.5	71.5	76.4	106.0	82.2
1968-69							
1. Receipts	566,329	683,846	593,195	652,022	606,447	489,066	3,590,905
2. Bales pressed	531,549	905,836	830,646	744,775	700,452	322,890	4,036,148
3. Proportion of (1) to (2) (per cent)	106.5	75.5	71.4	87.5	86.6	151.5	90.0
1969-70							
1. Receipts	587,970	694,231	586,905	404,600	473,469	444,136	3,191,311
2. Bales pressed	547,901	857,414	770,498	571,609	510,024	325,386	3,582,832
3. Proportion of (1) to (2) (per cent)	107.3	81.0	76.2	70.8	92.8	136.5	89.1

together. In 1968-69, such proportion ranged from 71.4 to 151.5 per cent and averaged 89 per cent; and in 1969-70, it varied between 70.8 and 136.5 per cent, and averaged 89.1 per cent. Evidently, most cotton moves rapidly from pressing units to spinning mills. No doubt, since the pressing returns cover only 85 per cent of the indigenous cotton crop, the foregoing proportions between the mill receipts and bales pressed are slightly over-estimated. On the other hand, these proportions also involve some under-estimation, for annually 5 to 6 per cent of the domestic cotton crop does not enter into mill consumption, being utilized for exports and other extra-factory needs. But even after allowing for the probable net over-estimation in the different proportions, there is no gain-saying that almost 75 per cent or even more of the market arrivals of *kapas* enter the mill compounds soon after such *kapas* is ginned and pressed into bales. Conversely, it follows that not more than just a quarter of such market arrivals flow into the commercial storage.

But the story of storage does not end here. For, at any time, not all the commercial stocks of cotton are really "free." As is known, considerable part of such stocks are usually committed to mills against unfulfilled forward sales. Though no time-series data of "sold" and "unsold" stocks of cotton with the trade are available, such details are gathered by the East India Cotton Association twice in a year with regard to the commercial stocks of cotton held in Bombay. These are summarized in Table VI which discloses the pattern of commercial storage in cotton.

TABLE VI—HALF YEAR-END AND YEAR-END STOCKS OF COTTON HELD BY THE TRADE IN BOMBAY, 1967-68 to 1969-70
(in bales of 180 kg.)

Nature of stocks	1967-68		1968-69		1969-70	
	28-2-1968	31-8-1968	28-2-1969	31-8-1969	28-2-1970	31-8-1970
(1) Unsold ..	93,584 (60.0)	55,589 (46.9)	113,339 (55.5)	33,044 (57.3)	55,599 (45.8)	28,893 (62.0)
(2) Sold but not delivered ..	62,295 (40.0)	62,960 (53.1)	90,710 (44.5)	24,639 (42.7)	65,739 (54.2)	17,746 (38.0)
Total ..	155,879	118,549	204,049	57,683	121,338	46,639

Note : Figures in parentheses are percentages to the total.

Source : Indian Cotton Annuals, East India Cotton Association Ltd., Bombay.

As will be evident, not more than three-fifths of the cotton stocks held by the trade are unsold. The rest are clearly not available for commercial distribution, being already sold to the mills but not delivered. When due account is taken of such 'sold but not delivered stocks,' it seems that not more than 15 per cent of the total arrivals of *kapas* during the peak marketing months really accumulate as unsold stocks with the trade, and yield returns, either positive or negative, from price fluctuations during the storage intervals.

In fact, long before marketing of *kapas* in any variety begins, mills not infrequently make forward purchases of cotton of that variety against non-transferable specific delivery (n.t.s.d.) contracts. Such contracts are entered into as many as 6 months before their eventual fulfilment by delivery. Therefore, quite often, with large forward sales to mills, the stocks of several varieties of cotton with the trade are actually negative. Far from benefiting the cotton merchants such a situation results in losses from the subsequent spurt in price, since the merchants are then perforced to cover their earlier sales at higher market prices. Many a time, such subsequent price rise is aggravated as merchants hastily cover in the spot market their earlier n.t.s.d. sales.

In the light of these conflicting facts, it would be nearer the truth to assert that cotton merchants, by and large, sell cotton as fast as they buy it from the farmers. Hence, the magnitude of their profits depends not so much on the seasonal price fluctuations as upon the rapidity of their turnover in the market. True, a few astute traders may, at times, earn profits from the seasonal price fluctuations; but since neither the magnitude nor the nature of seasonal price fluctuations is uniform from year to year, such 'profits' must be ascribed to the skill of the individual traders and not to their stereotyped storage operations. Quite logically, therefore, most cotton merchants earn their margins through quick purchases and sales and limit their storage transactions to the minimum. Hence, it is not only misleading but quite erroneous to estimate the profits of cotton merchants by lagged marketing margins instead of by concurrent margins between the assembling and terminal markets.

Summary and Conclusion

This paper was aimed at examining the validity of the concurrent marketing margin method in assessing the true shares of cotton growers and merchants in the consumer's rupee in view of the criticism that such method ignores the returns to cotton merchants from storage. The empirical evidence led in the paper disclosed that during the past three years, 1967-68 to 1969-70, the 'net' returns from storage of cotton were in the aggregate negative for all storage intervals. Though the statistical significance of this finding could perhaps be disputed in view of the short period of the study, an investigation into the trading and stock-holding pattern of cotton merchants revealed that merchants sell cotton as fast as they buy and, therefore, not more than a small fraction of their cotton purchases really enter into storage. This pattern was observed consistently in all the three years under study. There is no reason to believe that the pattern of marketing could be different in other years. Evidently, the concurrent marketing margins rather than the lagged margins determine the magnitude of cotton merchants' profits.

Incidentally, it should be admitted that large seasonal price fluctuations in cotton are symptoms of the underlying market imperfections. These imperfections emerge more from lack of market information and knowledge of crop prospects than from the alleged unhealthy speculative and hoarding practices of cotton merchants. As it is, the official cotton crops estimates become available only at the end of the cotton season when the crop is not only marketed but even largely consumed. The uncertainty regarding cotton imports often adds to the confusion regarding the prospective cotton supplies. Surprisingly, the authorities have chosen to close the cotton futures market which would have normally enabled better price predictability and offered facility for hedging against market uncertainties. In its absence, trading in ready and n.t.s.d. contracts has become more volatile, and frequently causes wider price fluctuations than warranted by the actual supply and demand equation. Had cotton supplies been adequate, if not abundant, one would have advocated a system of buffer stocks to reduce the inter-seasonal as well as intra-seasonal price fluctuations in cotton. But in view of the persistent cotton famine in the country, one must rule out such a solution for the near future. The best recipe could immediately be found in only the development and dissemination of knowledge of stocks and crop prospects, and the revival of futures market in cotton.